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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,892	06/29/2001	Hideaki Ono	50195-261	4949

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McDERMOTT, WILL & EMERY
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Washington, DC 20005-3096

EXAMINER

SHEEHAN, JOHN P

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 11/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/893,892

Applicant(s)

ONO ET AL.

Examiner

John P. Sheehan

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-12 and 14-19 is/are pending in the application.
- 4a) Of the above claim(s) 5-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date Feb. 19, 2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 10, 2004 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 14 to 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

I. In claim 14, lines 7 and 8, the meaning of the claim language, "wherein the content of said rare earth metal element is from 2 to 15 atomic %" is not clear in that it is not clear what the atomic % is based on. For example, is the atomic % based only on the hard magnetic phase or the entire mother material?

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II. In like manner, in claim 14, lines 8 to 10, is the proportion of 1 to 25 atomic % for the B, C, N and O based on one or the other of the hard and soft magnetic phase or is this proportion based on the entire mother material?

Regarding the 112 rejections set forth above, those skilled in the art would not understand what is claimed even when the claims are read in light of the specification.

Claim Rejections - 35 USC § 102/103

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 14 to 19 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nomura et al. (Nomura, US Patent No. 6,261,385).

Nomura teaches an anisotropic nanocomposite rare earth permanent magnet consisting of a hard magnetic phase and a soft magnetic phase (column 3, lines 28 to 35). Nomura teaches that the hard magnetic phase contains a rare earth metal, a transition metal and nitrogen or boron (column 3, lines 60 to 68) and the soft magnetic phase can contain at least one transition metal and boron or nitrogen (column 4, lines 3 to 8). Nomura teaches that the hard magnetic phase can contain at least one rare earth, a transition metal and N or B (column 4, lines 37 to 43) and that the soft magnetic phase can contain a transition metal and B (column 4, lines 48 to 51). These hard and soft magnetic phases taught by Nomura are encompassed by the instant claim language used to claim the hard and soft magnetic phases recited in the instant claims. Nomura defines the crystal size of a nanocomposite as being "several tens of nanometers" (column 2, lines 40 to 45) which overlaps the instantly disclosed grain size of "150 nm or less" (applicants' specification, page 7, second paragraph). Nomura also teaches preferred combination of phases that are encompassed by the instant claims (column 4, line 60 to column 5, line 3). Nomura teaches that this magnetic material can be ground to form an anisotropic nanocomposite powder (column 8, lines 1 to 5). Finally, Nomura teaches specific example alloys that are encompassed by the instant claims (column 9, Examples 2 to 6).

The claims and Nomura differ in that Nomura does not teach the process steps recited in the claims.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the process steps recited

in applicants' product by process claims do not necessarily lend patentability to the claimed product, MPEP 2113.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695,698,227 USPQ 964,966 (Fed. Cir.1985).

It is noted that the use of a rejection under 35 USC 102/103 for product by process claims as set forth above has been approved by the courts, see MPEP 2113.

"[T]he lack of physical description in a product-by-process claim makes determination of the patentability of the claim more difficult, since in spite of the fact that the claim may recite only process limitations, it is the patentability of the product claimed and not of the recited process steps which must be established. We are therefore of the opinion that when the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claimed in a product-by-process claim, a rejection based alternatively on either section 102 or section 103 of the statute is eminently fair and acceptable. As a practical matter, the Patent Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make physical comparisons therewith." *In re Brown*, 459 F.2d 531,535,173 USPQ 685,688 (CCPA 1972).

Response to Arguments

4. Applicant's arguments filed November 10, 2004 have been fully considered but they are not persuasive.

4. The declaration under 37 CFR 1.132 filed November 10, 2004 is insufficient to overcome the rejection of claims 14 to 19 based upon Nomura as set forth in the last Office action because:

I. There is only one example of the claimed invention in the presented data. In view of this, the data is not considered to be commensurate in scope to the claims, In re Dill 202 USPQ 805 and MPEP 716.02(d). General superiority cannot be inferred from the results obtained using a single embodiment of the claimed invention, In re Greenfield, 197 USPQ 227, 230 and MPEP 2144.08 (B)..

II. Each of the Figures attached to the declaration is so dark that it is difficult to impossible to determine what it is that these Figures show. This is particularly true of Figure 2, which is so dark that the legend in the lower right hand corner is barely visible.

III. The method used to prepare Nomura's Example 3 alloy is not the method taught by Nomura. Nomura employed a wheel speed of 45 m/sec (Nomura, column 8, line 23) while applicants used a wheel speed of 24 m/sec to prepare the alloy. It is not clear how this change in wheel speed from that used by Nomura might effect the properties of the finished alloy.

Applicants argue, based on Figures 1 and 2 of the declaration, that the example of the instantly claimed alloy has a crystal grain size of 50 nm while the grain size of the Nomura alloy is 150 nm. The Examiner is not persuaded. As set forth above in the Examiner's discussion of the declaration, Figures 1 and 2 attached to the declaration are so dark it is difficult if not impossible to draw any conclusions. Further, Nomura's alloy is disclosed as a nanocomposite and Nomura defines the crystal size of a

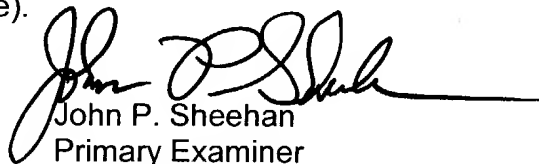
nanocomposite as being "several tens of nanometers" (column 2, lines 40 to 45) which overlaps the instantly disclosed grain size of "150 nm or less" of applicants' alloy. (applicants' specification, page 7, second paragraph).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (571) 272-1249. The examiner can normally be reached on T-F (6:45-4:30) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John P. Sheehan
Primary Examiner
Art Unit 1742